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"NEC TENUI PENNA."

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EDITORS.

MEDICINE MEN.

Dr. Gihon, in his admirable essay upon Naval Hygiene, says that "The real character and mission of the physician have not been recognized. He is regarded solely as a *medicine man*, and there is a general rebellion against his authority when he prescribes to the well what they shall eat and drink; how they shall live, dress, and sleep; how their houses should be built, their lands tilled, and their food cooked. The public mind does not rise to the comprehension of the extent of province of our great profession. The scientific medical man is at most regarded as an 'allopath,' a sectarian amid globulistic and rational homeopaths, Thomsonians, and Swedish-movement curers."

This is as undoubtedly true as it is well said; and the question arises, How are matters to be changed? We fear never, until some radical alteration is made in the constitution of humanity, and not a little in that of the profession itself. The mass of doctors who are supposed to belong to the "scientific school" are in fact nothing but "medicine men." They are so primarily, we suppose, because they recognize the fact that the world wants them to be medicine men; and secondarily, because they are cast in the same mold as is the world to which they minister. The naval surgeons of the United States are as a class highly educated men, and selected for their positions after a most rigid examination. The majority of them—we dare to say not all of them—will rise far above the status which Dr. Gihon says the world has fixed for doctors in general; but if this gentleman will mix much with the seventy-five thousand who practice our art ashore in the Union—and indeed generally with those who practice it elsewhere—he will find that the vast majority of this number is formed of decided men of medicine, and the world is not far wrong in its estimate. Many of the best of us, says Mr. Buckle, a not very unastute observer, are devoting our lives to matters in which any intelligent nurse would be our equal.

We are always disposed to take the best view of things, and to ruffle ourselves as little as possible over the inevitable. We rejoice at the advanced and advancing position of sanitary science, and trust the day is not far distant when hygienists will be agreed between themselves upon what they want, and will arrive at our faith in fresh air, sewerage, and general cleanliness. We rejoice at the advancing standard of medical education and the diffusion of popular knowledge, and all that sort of thing; but we don't believe that we are ever going to reach the day when the doctor is to be supplanted by the hygienist; nay, more, when the hygienic element in his constitution is to preponderate over that which is medical. The people are going to have medicine, and they are going to find those who will give them medicine. It is all very well to tell a sick man to have his windows open and his sheets aired, but he will run a short career in practice who stops at that. And after all we do not see any thing so terrible in a belief in drugs. We have observed before that certainly we have evidence that they

do good under certain conditions, and even we doctors prescribe them in full faith. Why not, then, should the people take them in confidence and ask for more. No, indeed. Because we believe in preventive medicine we are not going to let go our hold on that which is curative. At any rate, if the dear people wish to be drugged, we should say, dose them to their stomach's content.

CONSIDERABLE fear is expressed that the wonderfully open winter that we have passed through will be the cause of much sickness during the summer months. The magnolias bloomed in open gardens in Louisville during February, a thing unheard of before. As the intensely cold winter of 1878–79 failed to kill the yellow fever-germs, let us at least hope that the mild winter of 1879–80 will not produce them.

THE whirligig of time brings a curious controversy to our columns. We view the combat which progresses on our premises from an upper window, and calmly await the result. The dead shall be decently interred.

WE call the attention of our readers to the letter of our London correspondent. It contains an admirable *resumé* of the vaccination question.

Original.

TRAUMATIC TETANUS.

BY L. J. JONES, M.D.

Recoveries from traumatic tetanus are of such rare occurrence that I deem it not altogether uninteresting to report the following case:

Tommy H., aged twelve, in good health, but naturally of a rather nervous temperament, received a lacerated and contused wound of right hand, tearing up the palmar fascia of about half the hand and severely wounding two or three fingers. The wound was caused by a forty-blade cutting-knife while he was in the act of cutting up oats for feed.

The hand was properly dressed an hour after receiving the wound. Ten days subsequently unmistakable signs of lockjaw were noticed. Wounds were then dressed with an emollient poultice made of hops, opium, and bran, and morphia to the extent of thorough narcotism administered; but in less than forty-eight hours opisthotonos, locked jaws, tetanic twitchings, impending apnea, and all the well-developed symptoms of tetanus were manifest.

Gave twenty grains potass. bromide every four hours, day and night; chloral hydrate in fifteen-grain doses, with a view to keeping patient thoroughly asleep all the time, except when awakened to administer medicine and take nourishment. Applied same poultice twice daily and kept the bowels in a constipated condition; probably once in five or six days would produce an action by enema or salts. He was kept in this sleepy, stupefied condition for about three weeks.

It being apparent, when he was aroused for the purpose of giving the anodynes, that opisthotonos and other tetanic symptoms would commence immediately, I deemed it essential to keep up the anodynes to that extent till all symptoms of the spasms ceased upon waking. Thus for three weeks he was kept asleep by the large and frequent doses of chloral hydrate and bromide potassium. As the symptoms of tetanus began to disappear, I gradually lengthened the intervals between the doses till he ceased to take any anodynes whatever.

The case is now convalescing and free from any signs of the disease. I believe a very important auxiliary, in addition to the chloral and bromide, was in keeping the bowels in a state of quietude, a very light diet, the darkened room, and avoidance of the least noise or draft of air upon the patient. The conclusion arrived at is: The cure was effected by keeping the patient so thoroughly and so continuously under the influence of chloral and bromide potassium that I was sometimes alarmed lest we should find it impossible to arouse him at all. Just to that extent we endeavored to keep up the two anodynes for three weeks.

During my experience as surgeon in the Confederate States army, where I treated a great number of cases of tetanus, I never found this good effect from the use of morphia or chloroform carried to the same extent of narcotism, nor any good result from amputating above the wound.

FRANKLIN, KY.

MODERN MEDICINE.

A Valedictory Address delivered to the Graduating Class of the University of Louisville at the close of its Forty-fourth Session.

BY LUNSFORD P. YANDELL, M. D.

Professor of Clinical Medicine and Diseases of Children, University of Louisville.

A common regret of the ambitious youth at that period when the ripening and expanding mind begins seriously to contemplate life is that he was not born in an earlier era of the world, when the unknown abounded and the glories of discovery were likelier of achievement. This repining is fostered by the daily discourse of the elders whose knowledge and wisdom he has been taught profoundly to revere, and who are forever decrying the present and magnifying the past, and whose psalm of life expresses a perpetual longing for the good old times when saints and sages and seers abounded and there were giants in the earth.

But intercourse with books and men, as the youth advances in maturity, throws a different light on the pages of life. He learns that though the mountains are ever crumbling and diminishing under the corroding hand of nature as it piles upon them the ice and snow of winter and pours down on them the rains of summer, and though the oceans are ever growing shallower as the ceaseless rivers bear to them the debris of the wasting lands, he also learns that mankind degenerates not, neither is static like the inferior animals, which are without inherent power to elevate themselves above their progenitors. He learns that the longevity and strength and stature of his race to-day are greater than at any previous period. He sees depicted in the paintings and marbles and bronzes of the ancients the highest type of female beauty extant when these works were fashioned by the hand of genius; and it is certainly no exaggeration to affirm that female beauty to-day, judged by these records, is of a higher type than the world has ever known. The unaided eyes of the modern astronomer are able to perceive stars that were invisible to the earlier students of the heavens. The brilliant conduct of our late terrible internecine war demonstrated that in martial skill and courage the race is not degenerate, and subsequent events have proved us possessed of an admirable conservatism and sublime patience unequaled in history.

To the aspirant after fame and usefulness therefore there is nothing discouraging in the outlook of life to-day. The present is far more glorious than the past, but the possibilities of the future seem grander still. There is yet abundant work to do, and there is untold honor within the reach of him who is earnest in the labor of life.

The profession which you have entered is one of the most serious and important as well as fascinating branches of natural history, and the investigation of it is an ever-enhancing pleasure to its faithful student.

Medicine, like the other so-called liberal professions, divinity and law, has received its share of sarcastic criticism from the wise and thoughtful as well as from the idle and ignorant, and it would be foolish and dishonest to pretend that in the past medicine has been wholly blameless.

Doubtless many lives have been lost through lack of medical knowledge and skill, and many have been sacrificed to what was inaptly called heroic treatment, the result of false theories made current by the misled minds of brilliant writers and teachers.

But our profession is rapidly coming to the knowledge that science means measurement, that theorizing is but guessing, and that bedside investigation in private practice, in hospitals, and in dispensaries is the only reliable source of therapeutic knowledge, especially in the hospitals and dispensaries, the true laboratories of medicine. We are unceasingly collecting useful vital facts on which is building the science of medicine, and before which the alluring but obstructive and harmful speculations of the past are rapidly fading.

In the lectures which you have heard

from me at the University you have not been asked to believe any thing which can not be proved. On the contrary you have been urged to cultivate a wise skepticism, not only concerning ancient dogmas but also as to modern discoveries. You have been told that error, false doctrine, and ignorance abound in our profession, and you have been earnestly advised diligently to search out the truth. You have been admonished to accept nothing blindly from teachers or books, no matter how plausibly presented or eloquently enforced.

You will hear it denied both in and out of our profession that medicine has yet any claim to be considered a science. You will be told that beyond a very limited number of specific remedies the practice of medicine is uncertain, unscientific, and empirical. My own views, as you have elsewhere learned, are widely different from this. I believe that medicine has indisputable claims to a place among the sciences. I believe that we are already possessed of the means for the prevention or cure of the majority of human maladies. The chief obstacles in carrying our knowledge into practice are the ignorance, bigotry, poverty, and perversity of mankind. I will enumerate a few examples of what the science of medicine has done and can do.

Leprosy and the plague, loathsome diseases, once abundant and dread scourges of the race, are now almost unknown in the more highly civilized countries. It is a curious fact that the former* ceases to be hereditary when brought to America and the latter has never been seen within our boundaries. By food and ventilation and drainage these things have chiefly been accomplished.

Scurvy, a century since, on land as well as on water, annually carried off thousands. Most physicians to-day have never seen this destructive disease, and we know that it is absolutely preventable and curable by proper food and treatment.

Smallpox, less than a hundred years ago, invaded every family in Great Britain, depopulated whole neighborhoods and towns, and it was the exception to the rule for any one to escape this loathsome and disfiguring fever. To-day it is seldom encountered, and when man wills it it may be thoroughly eradicated. This is due to vaccination.

Syphilis devoured and disfigured thousands of victims even within the memory of your teachers. To-day we know that it is curable beyond peradventure.

Inflammatory rheumatism, a painful and dangerous malady, which until of late defied all treatment, or at least the treatment of which was utterly uncertain and unsatisfactory, we now cut short within a few hours or days, and seldom fail to cure by the salicylates.

Epilepsy, the disease of the gods and the disease of the devil, as it was once called, which often leads to homicidal mania, kleptomania, and idiocy, is to-day curable, or greatly mitigable in many if not most instances by the bromides and atropine and the constructives.

The same is true of spasmodic asthma, an affliction excruciating beyond description; and also of sick-headache, and a host of spasmodic affections.

The untoward events of the puerperal state, and those connected with surgical accidents and operations, are proved to be to a great extent preventable and curable by quinine and hygiene.

The myriad manifestations of the malarial poison which the ancients aptly typified in their awful water monster, the hydra, are now preventable and curable to an almost unlimited extent. Few persons to-day realize the terrible scourge which malaria once was. Formerly it swept from the face of the earth every year its thousands of victims. No class of society escaped its ravages. More than one royal personage perished by this poison, and the great Cromwell died of a plain intermittent or remittent fever.

Scrofula, in its innumerable forms, embracing, as I believe, all the varieties of

*So says Dr. J. Nevins Hyde, of Chicago.

consumption, though still the most abundant and prolific cause of human death, we now know how to prevent to an almost unlimited extent had we the power and the money to enforce proper hygiene. My confident belief is that consumption, under favorable circumstances, is curable in most instances, and this through the digestive and assimilative functions by means of constructives, nutritives, and the like.

Skin-diseases, from time immemorial, have been a reproach to our profession. The great John Hunter said of them: "They are of three classes. One of these is cured by sulphur, the other by mercury, and the other the devil himself can't cure." But you have learned that no diseases are more amenable to treatment, are more certainly and promptly and satisfactorily curable than those of the skin.

Obesity and emaciation are to-day in very many cases remediable. The uncomely and inconvenient proportions of the former are without danger reduced by diet and destructives to comfortable comeliness, and repulsive attenuation, it has been shown* may, by recumbent rest, oleaginous inunctions, electricity, and massage, be made to give place to delightful rotundity.

Cancer, we are beginning to believe, we possess a remedy for in arsenic; and it is probable that in the bromhydrate of quinia we have a cure for hooping-cough. Our present positive knowledge of the antidotes and tests for poisons must not be omitted in this connection.

Through the science of medicine the deaf are made to hear, the blind to see, cripples to walk; the insane are restored to intellectuality, and the idiot brain is developed into comparative usefulness.

The triumphs of surgery are simply enormous. The suffering assuaged and the lives saved by lithotomy, lithotrity, tracheotomy, and ovariotomy, by Sayre's plaster jacket, Esmarch's bandage, Davy's lever in hip-joint amputation, Martin's elastic bandage, and by anesthetics, and by medicines acting on certain tissues or organs of the body are incalculable. Twenty thousand years of health, usefulness and happiness have been added to the lives of English women by the ovariotomies, now numbering nearly a thousand, done by Mr. Spencer Wells, of London. This operation, as you know, originated in Kentucky.

The diseased heart, and head, and lungs, and spleen, and kidneys, and liver, and other important organs are to-day frequently restored to health by skillful surgery.

These are some of the facts on which the claim is based that medicine is truly a science.

The nations have their codes of law, and the churches have their creeds. The science of medicine does not yet possess any acknowledged code or creed of universal belief, and there is a wide diversity of opinion and practice in the profession. The following propositions, however, I venture to offer as demonstrable truths:

The causes of disease are few, though its varieties are many.

Diseases should be treated with reference to their cause and without reference to their locality. This is equally true of the conditions called fever and inflammation. The exceptions are rare.

Malaria is the most abundant source of acute, and is often the source of chronic, disease.

Scrofula is the most abundant source of chronic, and is often the source of acute, disease.

Malaria and scrofula often coexist, each intensifying the other. They frequently coexist with other diseases, thereby greatly augmenting their danger.

Alcohol is a fruitful source of disease, and produces morbid changes singularly like those of malaria.

The other sources of disease with which we are acquainted are mal-hygiene, the contagia, rheumatism, catarrh (cold), scurvy, epizooa, entozooa, vegetable parasites, mineral and vegetable poisons.

For most of the entozooa, epizooa, and

*By Dr. Wier Mitchell.

vegetable parasites, and for many poisons, we possess satisfactory remedies.

For the contagious and infectious diseases we yet possess no preventive, save isolation, except in the case of smallpox, and no specific, no positive cure, except for syphilis.

But in all these diseases the physician by his wisdom and skill may save many lives. For the catarrhal fevers and inflammations I believe we may claim in opium and aconite and that class of medicines antidotes or at least remedies of great curative power.

You will observe that I have said nothing of the germ theory of disease, or of antiseptic therapeutics. I have no faith in either, though the majority of the profession to-day are believers in both.

Pathological investigation proves that there is no such thing as an absolutely healthy man, and we have not yet remedies for all his ills. It is our business to discover these cures.

Our science is far from perfect, and there is a vast deal yet to be discovered. It is no less true that a vast deal has to be unlearned in our profession, and in both directions the greatest results are to be expected from the younger men.

To unlearn is more difficult to the old than to learn is to the young. It has been wisely said that it is hard for men to think that worthless which as youths they have toiled to acquire. Nothing truer was ever uttered, and this is an enormous obstacle to the advancement of science. Hume cites a striking instance of this when he says that not a physician in the British Isles who had attained the age of forty ever accepted Harvey's great discovery of the circulation of the blood, but on the contrary adhered through life to the absurd errors imbibed in early days. It is recorded that Harvey's standing as a physician was seriously injured by the promulgation of his novel views. His cotemporaries cried him down, calling him a visionary, a theorist, a hobbyist, an impractical man, and a dangerous doctor. It is to be hoped that the profession to-day is less bigoted, fogyish, obstinate, and conceited than it was in Harvey's time. I believe it is so, and, indeed, very much so, and yet there is wide room for improvement.

I am loth to believe that those of us who have passed forty are incapable of accepting that which is new, if it be demonstrably true. But if we are thus incapable the sin is our own, and the sin is the result of cerebral inertia.

The wise horticulturist produces perfect and abundant fruit on the old tree by judicious management. The successful farmer by honest work and liberal feeding maintains or increases the fertility of his acres; and so the great physician by a life of thoughtful study of disease at the bedside and in books, by intercourse with earnest, thinking, learned men, by patient and perennial labor, may maintain his intellectual vigor and usefulness to the end of a ripe and mellow old age.

A WORD AS TO THE MATERIAL OF WHICH DOCTORS ARE MADE.

Of the mature nations of the world England is the greatest and grandest, and yet one of her greatest and grandest sons has said, "Her population is thirty millions, principally fools." This is a declaration pregnant with thought, for most that is good and great in America comes from our English-speaking ancestors.

The children of Jonathan resemble marvelously and unmistakably in their moral, physical, and intellectual characteristics their grandfather, John Bull.

The medical profession is made of the same clay and is cast in the same mold as the rest of the human family.

One of the most brilliant members of our profession in Europe, in a late letter in the LOUISVILLE MEDICAL NEWS, speaking of one of the departments of medicine, uses this strong language, "The great stolid mass of British surgery." The writer is a wise man who knows whereof he speaks, and yet he writes of Englishmen, men who are

certainly the peers of their brethren in any portion of the world.

Shall I be considered as unpatriotic and unmannerly when I declare it as my belief, founded on a somewhat extensive acquaintance with the profession in both countries, that in brain-weight and brain-work we in America are not altogether and unlimitedly superior to our cousins across the sea? No, the plain truth is, gentlemen, and I believe it wise and well to tell it to you on the threshold of your career, unpalatable though it may be both to you and to your elders, the mass of American physicians is inferior to the profession in Europe in scholastic attainments if not in ambitious devotion to the science of medicine. At the same time it is perfectly true, and every American is proud to declare the fact, that the past, and especially the present, of our profession abounds in names famous throughout the world, and in natural intellectual power and practicality the American doctor is surpassed by none.

THE BUSINESS OF MEDICINE.

So far I have spoken to you of the scientific aspect of our calling, but as most of you are dependent on your work for food as well as fame, it is important that you should look at it in other aspects.

The practice of medicine, viewed in a purely business light, is the practice of men, and on your manners and management, I am sorry to say, more than on your mind, are likely to depend your early pecuniary success.

The same methods that are successful with the politician and the drummer in gaining votes and securing buyers will bring you business. Every city, town, village and neighborhood furnishes examples of this. But you, as honorable physicians, are debarred from soliciting, from seeking, from cultivating business by these means, no matter how excusable or even commendable they may be in other occupations. Capacity, energy, integrity, in a word, worth will in the long run secure you success.

Be patient, be gentlemen, and abide strictly by the Code of Ethics, and you will win. You have been honored to-day by being received as members of a great profession, and you should now determine to make yourselves great men in this profession, to become leaders and not to remain in the ranks. Resolve to rise above the mass of your fellows. It is a fact full of cheer for you gentlemen beginning life, that fame and riches are nowhere in the world so readily acquirable as in America, but I trust this information will not diminish your ardor.

During the illness of your patients the science and sentiment of your profession should occupy your thoughts, but when the case is terminated the important matter of business comes in, and you should demand a just reward for your services promptly and fully. The negligence and timidity and indolence of physicians in the business of medicine are the source of their proverbial poverty. People are influenced in their estimate of the value of our services by our own apparent estimate of their value.

An indefensible and humiliating custom, long extant but now diminishing, is in speaking of our patients as patrons, instead of as clients. An independent man and a gentleman is never patronized. If you are willing to have patrons you are unworthy to be doctors. The profession of medicine is no place for dependents and toadies. Your fees are your rights, and their collection is necessary to the maintenance of your health and happiness and the welfare of your family.

THE CANT OF MEDICINE.

There is a vast amount of cant and rubbish written and talked on occasions like this and on many other occasions, about the nobility, the charity, the purity, the integrity, the philanthropy of physicians. I have not perceived that any honest avocation ever changed a man's nature. We of medicine are as good as our fellows in other occupations, but no better.

"Away with this canting about great motives. Let us not be too proud and fancy

ourselves martyrs of the truth—martyrs and apostles. We are but tradesmen working for our bread, and not for righteousness' sake. Let us try and work honestly, but do not let us be prating pompously about our sacred calling." This incisive admonition from the cynical but sincere Thackeray to his fellow-authors, through the mouth of one of his characters, I earnestly commend to you, barring, of course, the use of the term "tradesmen" in its offensive European sense; remembering that in our free country honor and social position are not the inherent or inherited property of particular occupations or casts, but are the dues, if not always the reward, of personal merit.

THE SENTIMENT OF MEDICINE.

A few more thoughts, and they shall be very brief, and I have done. Sentiment is inseparable from humanity, and sentiment is very beautiful and useful, and well in its place; but it is one of the banes of our profession, and predominates to-day to a lamentable extent to the detriment of its science and business.

An eccentric old physician once said to me, "The life of a doctor is a hard one if he gets practice, and a deal harder if he does not." Fortunately our pecuniary emoluments are not our only recompense. Our cures are not done by drugs alone, neither is our reward only in money. The confidence, the affection, the devotion which the physician's grateful clients feel for him and show toward him; and the consciousness, as he looks about him, and back over the past, that he has saved this sainted mother from death, and has snatched that beautiful child from the grave's brink, and has kept yonder great and good father from going into the dark valley—this is a wealth, these are riches of value inestimable, of which only the men of our art can ever know.

Graduates of the University of Louisville, rest assured you carry with you wherever you may go the best wishes of the Trustees and Professors of your Alma Mater. May you bear the standard of the science you have espoused further and higher than you found it. May you win the honorable admiration of your professional brethren, and may you deserve and receive the gratitude of your fellow men. Farewell!

Correspondence.

LONDON LETTER.

FROM OUR SPECIAL CORRESPONDENT.

The Question of Vaccination by Calf Lymph—Description of the English System of Compulsory Vaccination—Vaccine Stations—Public Vaccinators—Inspectors of Vaccination—Gratuities for Successful Vaccination—The Conference on Animal Vaccination—Discussion between Sir Thomas Watson and Mr. Ceely, of Aylesbury, as to the Nature of Cowpox—Present State of the Argument—Opposite Conclusions from the Experiments of Chauveau of Lyons, and of Badcock of Brighton—Further Experiments needed to decide the Question.

To the Editors of the Louisville Medical News:

As I mentioned, I think, in my last letter, one of the subjects which is most interesting to the medical public here at this moment is the discussion whether calf lymph should or ought to supersede humanized lymph; and if so, whether and to what extent calf lymph should be introduced as part of our compulsory system of vaccination. You are aware that we have in England a very elaborate system by which provision is made for the vaccination of every child on or before the date at which it attains the age of six months. For this purpose great pains have been expended; the whole country is mapped out into districts, and to each district a public vaccinator is appointed by the Board of "Poor-law Guardians," who preside over the administration of relief to the poor in that district. This public vaccinator is paid by the guardians a salary which is calculated to allow about fifty cents for each vaccination. A station, or in large districts more than one station, is appointed at which the public vaccinators must attend on stated days, usually once a week or oftener. To this station the poor people bring their children, and there from week to week they are vaccinated from arm to arm. In order that the vaccination may be thorough and complete, another officer is appointed by act of Parliament, known as the vaccination officer, whose duty it is to inspect the birth-registers and to see that no children escape vaccination who have been born in the district during the last six months. This of course he

does by comparing the vaccination-register with the register of births. Where it appears that any children have not been vaccinated within six months of their birth it is his duty to serve a notice on the parents, directing them to take their child to the nearest station for vaccination; and the only excuse which is admitted as valid against compliance with this order is the production of a certificate from a medical man that the child in question is in a state of health in which vaccination will be likely to affect it injuriously. Further, a medical officer of the Central Board in London makes periodical visits of inspection, and large gratuities are awarded to public vaccinators who are found to have done their work quite regularly and well.

This system has been gradually perfected with great care, so that it is calculated that at the present moment not more than four per cent of the children escape vaccination in well-managed districts. Nevertheless it is not carried out without great opposition. A very active and noisy party objects to compulsory vaccination because "it is contrary to the natural laws of freedom," since it compels a parent to inoculate the body of his child with an animal poison of which the effects can not with certainty be predicted, and since also vaccine matter has, in their belief, implanted seeds of disease, and especially of syphilis, which may blight the future existence of the child. These arguments are mixed up with a great deal of violent declamation against the doctrine of vaccination with masses of utterly false, valueless statistics showing that vaccination does not protect against smallpox, and generally with abuse of an unworthy kind. Putting aside, however, the palpable fallacies in their statistics and the fanatical determination with which they deny the value of vaccination as protective against smallpox, there remains a substratum of reason in their objection.

We hold strongly to our system of compulsory vaccination in England because it shows very clearly that since the compulsory vaccination act was introduced the mortality from smallpox has been reduced by one half of that which existed in the years when vaccination was general but not compulsory. The actual figures are very striking. The mortality from smallpox in England before the introduction of vaccination was 3,000 per million; the mortality from smallpox after the introduction and generalization of vaccination fell to 400 per million; and the mortality of the years which have passed since the introduction of compulsory vaccination (in 1858) have fallen to 124 per million; and there is little doubt that as the methods of vaccination become more complete smallpox may be entirely eradicated from our country. But in order to make vaccination entire and complete it is necessary that it be of a compulsory character; and fully to justify compulsory legislation it seems necessary that all possible risks, however rare and however light, should, as far as possible, be eliminated.

At one time the possibility of conveying syphilis by vaccination was altogether disputed; nevertheless the more recent investigations which have been made since 1870 have produced a few, happily a very few, but still well-marked cases in which syphilis has been communicated by vaccination. The cases investigated by Mr. Hutchinson in England are conclusive on this point. It is true that no other set of cases are known to have occurred in this country, and it is possible no others have occurred; nevertheless it is a contingency which can not be altogether left out of sight when compulsory vaccination is the order of the day. So also it comes within the knowledge of men as careful in observation as Dr. Ballard, the inspector of the Local Government Board; Mr. Ceely, of Aylesbury, the Nestor of British vaccinators, and other careful observers, that from time to time there is a tendency for humanized lymph to degenerate, that under such circumstances the vaccine vesicle appears on the arm at an early date, it runs a rapid and premature course, and the protection afforded is inefficient, while the matter taken from such vesicle in its turn becomes but slightly protective against future attacks of smallpox.

Now an immense experience has accumulated in France, in Italy, and especially in Belgium and Holland, which shows that calf lymph properly propagated and properly employed may be depended on to produce effective human vaccination, showing more thoroughly typical vesicles, a more active *vacceine*, and a more certain protection than can always be depended upon in the case of lymph of long humanization. Under these circumstances Dr. Cameron, a Glasgow physician, who represents Glasgow in the House of Commons, has introduced a bill for providing animal vaccine as an optional mode of vaccination at all the vaccination stations. This bill is likely to be actively debated in Parliament, and the parliamentary

committee of the British Medical Association, at the instance of its chairman, Mr. Ernest Hart, recently resolved to take this question into thorough consideration, with a view to advising ministers on the subject. A conference of physicians was called, which was attended by hundreds of well-known men, and an elaborate report on the subject was prepared and presented by the chairman, Mr. Hart (of which I herewith forward you a copy), showing that animal vaccination has made great strides throughout Europe during the last few years, and that the propagation of lymph from calf to calf is now easy; that the lymph can be readily stored by M. Warlomont's method of defibrinization by capillarybites; and that the success attained by its use is very great. A very interesting debate followed, in which Sir Thomas Watson, Professor Warlomont of Belgium, Dr. Ballard (on behalf of the minister presiding over the Local Government Board of Great Britain), Mr. Ceely, and other eminent experts took part. The general result has been that the evidence in favor of the value and the use of a system of vaccination from arm to arm as the *general system* has been once more most fully established.

On the other hand, it is now pretty well agreed by all who have thoroughly looked into the subject that it is extremely desirable from time to time to renew stocks by the use of calf lymph of good quality and active character.

Under these circumstances it is understood—without troubling you with further details—that the government here will at once commence a course of experiments with a view of ascertaining, first of all, what is the precise number of successes which are to be obtained by careful vaccination with calf lymph as compared with equally careful vaccination with humanized lymph, the success being counted not only by the appearance in each case of vesicles on the arm, but by the number of vesicles as compared with the points of insertion on each arm.

As you probably know, it is the belief in this country that the amount of protection afforded by vaccination corresponds, within fixed limits, to the number of vesicles obtained by vaccination and the number of well-pitted marks which such vaccination leaves on the arm. Four well-vaccinated marks—that is to say, good vesicles leaving well-foveated impressions—seem, according to the irrefutable statistics of the smallpox hospitals, to afford an almost absolute security against smallpox. An extremely small number of persons who possess such marks are ever attacked by smallpox, even in the most virulent epidemics; and when they are so attacked the mortality among them is only three quarters of one per cent, instead of averaging from thirty-five to forty-five per cent, which is the average mortality among unvaccinated persons. Moreover, the mortality among vaccinated persons, according to the experts of all our smallpox hospitals, varies from fifteen per cent among those who are attacked by smallpox, having only one vaccination mark, down to seven per cent with those who have two vaccination marks, and only three per cent with those who have three vaccination marks.

Should the results of the experiments which will now be carried on by the government here show that as good results can be obtained in the way of vaccine vesicles and vaccine marks by the use of calf lymph as by the use of humanized lymph, it will necessarily follow that the government will adopt the use of calf lymph for the central stations from which lymph is furnished for the use of the public vaccinators at local stations, by which to start their arm-to-arm vaccinations. So much has almost been promised by the minister to a deputation which waited on him last week, headed by Mr. Ernest Hart, and which included a president of several of our principal public health associations.

A very curious debate has occurred incidentally on the subject of the nature of calf lymph, or rather of cowpox. On the one hand, Mr. Ceely and Badcock thirty years ago proved that by inoculating cows with matter taken from the vesicles of smallpox a condition is produced in the cow which corresponds precisely with the cowpox of Jenner, and that matter taken from such vesicles so induced in the cow produces on the arm of the infant all the ordinary effects of cowpox lymph, and is in fact indistinguishable from cowpox. In other words, it follows from their experiments that the cowpox of the cow does not in any respect differ from and probably is nothing else than secondary smallpox inoculated on the cow and running a course modified by the constitutional character of the animal; and again, that vaccination is nothing else than the induction in the infant of smallpox of a kind modified by the fact that the smallpox virus has passed through the cow, and that under those circumstances it has become very largely minimized in its violence, while it does not

cease to afford protection against ordinary smallpox. This view is, however, contested by M. Chauveau, of Lyons, who, in a series of experiments upon the cow, failed to produce the same effects as Ceely, Badcock, Green of Birmingham, and others have succeeded in producing here.

M. Chauveau published a report upon this subject, known as the Lyons Report, in which he declares that if you inoculate a cow with smallpox, and take the matter again from the cow and invaccinate it upon the human subject, you produce not vaccinia in the child, but ordinary smallpox, or that which tends to be ordinary smallpox; and he altogether dissents from the view that cowpox and vaccine smallpox are the same. This view has been strongly adopted here by Sir Thomas Watson, a physician whose name always carries very great weight, and he has lately put it forward again. It did not, however, find much favor at the recent meeting. On the contrary, some curious facts were pointed out which strengthened very much the view of Ceely and Badcock that what is called cowpox is nothing else than human smallpox inoculated in the cow.

Thus it was observed that in Jenner's time, when smallpox was very prevalent among the milkers in the vale of Aylesbury and elsewhere, cowpox also was very common; but now that smallpox is rare in that district, and generally in the rural districts extremely rare, and now that sanitary care makes it almost impossible for persons with smallpox vesicles still on their hands to be intrusted with the duty of milking cows, cowpox has practically disappeared; so that for several years large rewards have been offered for the production of cases, without the effect of producing one such case.

Again, it is pointed out that one hears always of cowpox and never of bullpox, and the vesicles appear always on the udder, the part handled by the milkers. No example can be suggested of a disease common in a genus and communicable from one to the other, such as cowpox should be in the Watsonian view, which does not affect the male as well as the female. Scientifically also, if, as is undoubted, the matter taken by Ceely and Badcock from healthy cows inoculated with smallpox, and in whom this inoculated smallpox had produced vesicles; if, moreover, such matter when re-inoculated into children produces vesicles which in their appearance, in their course, and in their result are identical with ordinary vaccine vesicles such as Jenner describes as being the result of cowpox, and as are now seen when the matter is still used; if this be granted it is not easy, I say, to understand by what argument it could be maintained that there is any specific difference between the matter of Badcock and the matter of Jenner. Nevertheless Sir Thomas Watson, although unwilling, owing to age and infirmity, to argue the question further, maintains his belief and holds to the view that cowpox is the inoculated grease from the horse, and that its occurrence on the cow is clear by the fact that the persons who attended the horse are those who milked the cow, and that the rarity of the occurrence of cowpox is probably due to the improved care of the horse and the resulting rarity of grease among horses.

This is an ingenious but far from being a satisfactory series of hypotheses, and does not answer the scientific argument as to identity of scabic result. The question is one of great interest, and will require to be made the subject of further experiment before it can be said to be finally settled. I must confess, however, that in my view the strength of the argument lies altogether with those who believe in the identity of cowpox with human smallpox inoculated into the cow; and this also was Jenner's own belief.

Great credit was given to Dr. Martin, of Boston, in the course of the discussion, for the pains which he had taken to introduce animal vaccination into America.

To the Editors of the Louisville Medical News:

In an editorial entitled "Is it Libel?" I published in the Medical Herald for February a letter bearing Prof. C. W. Kelley's signature. As the letter contained notoriously false statements about the faculty of the Kentucky School of Medicine, and as it was addressed to a student who it was known contemplated attending the present session of that school, I felt justified in making the comments which appeared in my editorial above mentioned. Now, that Prof. C. W. Kelley might have a fair chance of defending his disgraceful conduct, I wrote him a polite postal note offering him my pages for any explanation or defense he might wish to make. I regret to say he has not accepted my invitation. He claims, in the card you published, his willingness to defend the statements contained in his letter published in the Herald. That letter said, "*Three of the professors now in it* (the Kentucky School) *graduated last year.*" The only member of that faculty who graduated last year is Dr.

Woody. Dr. Coomes is the next youngest graduate, and he received his medical degree at the session of 1872–3.

Dr. Kelley states falsely when he says I ever had any opportunity to know how the officers of the Louisville Medical College "are particular not to receive mail of the Kentucky School of Medicine." I never knew any thing in particular about the way they behave under such circumstances until I saw the letter which I published. I have seen the sworn statements of a perfectly reliable and trustworthy witness, a non-resident of Louisville, affirming that he addressed a communication to "the Dean of the Kentucky School of Medicine," and received a reply from Dr. C. W. Kelley, long since the separation of the Louisville Medical College and the Kentucky School.

Dr. Kelley's defense of the statements contained in the letter published in the Herald is now in order.

DUDLEY S. REYNOLDS, M. D.,
Editor Medical Herald.

Miscellany.

COMMENCEMENT EXERCISES OF THE UNIVERSITY OF LOUISVILLE, FORTY-FOURTH SESSION.

The Commencement Exercises of the University of Louisville, Medical and Law Departments, were held in Public Library Hall on the afternoon of February 27th, in presence of an immense audience. The following was the programme for the occasion:

Overture, "Jubal"—Weber.
March, "Calico"—Weingarten.
Prayer by Rev. E. T. Perkins, D.D.
Salutatory by Woodford Hector Dulaney, jr., of Kentucky, member of Junior Law Class.
Serenade—Titl.
Conferring the degrees, M.D. and LL.B., by Hon. Isaac Caldwell, President.
Waltz, "Cleo"—Kretschmar.
Conferring the prizes of the Medical Department by the President.
Selection, "Fatinitza"—Suppe.
Medical Class Valedictory by Ambrose McCoy, of Tennessee.
Tarantella—Hasselman.
Law Class Valedictory by Oleonder H. Pollard, of Kentucky.
Andante, from Symphony No. 4—Haydn.
Address to Alumni, Law Department, by Shackelford Miller, Esq., of Louisville, Ky.
Waltz, "Congratulation"—Faust.
Valedictory by Prof. Jas. S. Pirtle, of Law Department.
Selection, "Little Duke"—Lecocq.
Valedictory by Prof. Lunsford P. Yandell, of Medical Department.
Benediction.
March, "Farewell"—Piefke.
Music by Eichhorn's Orchestra.

The following gentlemen formed the roll of honor of the medical class:

Richard Maupin Ferguson, M.D., of Kentucky.
P. H. Kempf, M.D., of Indiana.
Wellington A. Post, M.D., of Illinois.
John H. Maull, M.D., of Indiana.
Ambrose McCoy, M.D., of Tennessee.
Walter E. Scott, M.D., of Kentucky.
George D. Posey, M.D., of Kentucky.
Robert J. Swain, M.D., of Texas.
William L. Ward, M.D., of Texas.
Richard J. Leonard, M.D., of Indiana.

In the contest for honors, which was unusually severe, consisting of written examinations which occupied several days, it was found upon opening the mottoes that Messrs. Ferguson, of Kentucky, and Kempf, of Indiana, had tied for the first place, and it was deemed better that they should divide the highest honor rather than renew the trial. To each of these gentlemen was therefore awarded the Yandell Memorial Medal, which marks the first honor of the school. The second medalist was Mr. Post, of Illinois, and the third was Mr. Maull, of Indiana.

In the Undergraduates contest, on all subjects except Practice, Surgery, and Obstetrics, open to first- and second-year men, the first prize—a case of surgical instruments offered by Messrs. Arthur Peter & Co., wholesale druggists of Louisville—was awarded to Mr. Hoskins, of Kentucky; the second prize—a copy of Erichsen's Surgery offered by Messrs. John P. Morton & Co., publishers—was awarded to Mr. J. Morris Ray, of Kentucky; the third prize—a case of surgical instruments offered by Mr. Simon N. Jones, of the Louisville Pharmacy—was awarded to Mr. J. H. Hensley, of Indiana.

The degree of Doctor of Medicine was conferred on the following gentlemen, ninety-five in number:

B. L. Applewhite, Tex.	Isaac W. Amerman, Ill.
Geo. D. Armstrong, La.	Henry F. Askam, Ohio.
John E. Baugh, Tenn.	George Beard, Ky.
Phil. G. Beutel, Ky.	Benj. F. Berry, Mo.
Wm. C. Brown, Tenn.	Zadok W. Casey, Ark.
Wm. R. S. Connell, Ks.	J. W. Crewdson, Ky.
J. M. Curtis, Miss.	D. P. Custis, M. D.
Henry C. Coty, La.	John P. Deckard, Ill.
Robt. L. Douglas, Ala.	John L. Durham, Ind.
M. C. Ellis, Miss.	Andrew H. Evans, Ky.
R. M. Ferguson, Ky.	John T. Flanagan, Ky.
Wm. J. Feland, Tex.	Rich'd E. Garnett, Ky.
M. B. Garrett, Tex.	Chas. W. Hardin, Ky.
Allen R. Hancock, Ind.	Wm. B. Hardwick, Ala.
E. S. Hawkins, Tenn.	Jesse K. Hayes, Ky.

Joseph S. Hume, Ky.	Walter W. Holloway, Ky.
Alex. W. Holland, Ks.	Myra S. Iseman, S. C.
Emery C. Jones, Ind.	Leander O. Jones, Ky.
James H. Johnson, Tex.	Hiram R. Kennedy, Ala.
Paul H. Kempf, Ind.	Richard B. King, Ky.
Wm. T. Lampton, Ind.	Wm. P. Lafollette, Ind.
Wm. H. Lewis, Mo.	Rich'd J. Leonard, Ind.
Wm. C. Lehr, Miss.	Charles D. Lilly, Ky.
Harry V. Lucas, Ky.	John A. Long, Miss.
E. G. Magruder, Tex.	John H. Maull, Ind.
Wm. J. Moss, Miss.	David M. Morrow, Tenn.
John H. McIntosh, La.	P. H. McKinnie, Tenn.
Ambrose McCoy, Tenn.	L. R. McCormick, Ind.
Benj. McCloskey, Ky.	F. S. McRady, Tenn.
W. M. Murchison, Tenn.	W. B. Paynter, Ind.
Robert F. Peak, Ky.	Henry M. Pusey, Ky.
George D. Posey, Ky.	Wellington A. Post, Ill.
Daniel D. Rose, Mich.	James A. Smith, Ga.
E. M. Smith, Miss.	J. Sol. Smith, Ky.
Joseph A. Schenck, Ark.	James W. Squires, Ky.
Thomas O. Staples, Ky.	Frank C. Simpson, Ky.
Jas. B. Slaughter, Ind.	James W. Snider, Ky.
Wm. V. Saul, Miss.	Sam'l E. Schofield, Tex.
Benj. S. Story, La.	Robt. J. Swain, Tex.
Sam'l H. Singleton, Ky.	Joseph M. Swope, Ill.
Rich'd H. Stevenson, Ky.	James W. Stone, Ky.
Walter E. Scott, Ky.	Wm. F. Toombs, Miss.
James M. Tinsley, Ky.	Solon L. Vaughan, Ark.
J. S. Westerfield, Ark.	J. A. Westerfield, jr., Ark.
William L. Ward, Tex.	Felan S. White, La.
Jesse J. Wells, Tenn.	Duncan I. Watson, S. C.
James E. Wall, Tex.	Lorenzo L. Webb, Tenn.
Chas. S. Williams, Ky.	

Two hundred and fifty students attended the forty-fourth course of the Medical Department of the University. The spring session commences on Monday next, March 8th. An unusual number of students has already been enrolled for this course, which is the usual supplementary course given by the colleges of the American Association.

The valedictory address of Prof. Lunsford P. Yandell will be found in the supplement of this number.

A MEETING of the physicians of Louisville was held February 20, 1880, to take action on the death of Dr. John J. O'Reilly.

Dr. Thomas J. Griffiths was called to the chair, and Dr. Geo. W. Ryan was made secretary.

On motion, a committee was appointed to give expression to the feelings of those present.

The committee consisted of Drs. Lunsford P. Yandell, R. O. Cowling, J. A. Brady, W. P. White, and W. B. Doherty.

Dr. Yandell, chairman of the committee, offered the following, which was adopted as the sentiment of the meeting:

We are assembled this morning to give expression to our appreciation of the personal and professional worth of our strong young brother, Dr. John J. O'Reilly, who has just passed away from this world, and to offer our profound sympathy to the widow and mother and orphans.

The profession of Louisville has contained but few members of capabilities superior to those of Dr. O'Reilly. He was a rarely brilliant man. Whatever work he gave his mind to he did with excellence.

Above the mass of his associates in intellect as well as stature, in mental as well as physical beauty, he commanded attention wherever he appeared, whether in the pages of a medical journal or in an assemblage of men.

By his death our city and the profession of medicine sustains a serious loss, and mourning is brought to a wide circle of friends. To his bereaved relatives we offer our sincere condolence.

The secretary is directed to have the proceedings of this meeting published in the medical and secular press of the city, and to convey a copy to the family of the deceased.

LUNSFORD P. YANDELL,
R. O. COWLING,
JOHN A. BRADY,
W. P. WHITE,
WM. B. DOHERTY,
Committee.

NEWSPAPER LAWS.—We call the special attention of postmasters and subscribers to the following synopsis of the newspaper laws:

1. A postmaster is required to give notice *by letter* (returning a paper does not answer the law) when a subscriber does not take his paper out of the office, and state the reasons for its not being taken. Any neglect to do so makes the postmaster *responsible* to the publishers for payment.

2. Any person who takes a paper from the post-office, whether directed to his name or another, or whether he has subscribed or not, is responsible for the pay.

3. If a person orders his paper discontinued, he must pay all arrearages, or the publisher may continue to send it until payment is made, and collect the whole amount, *whether it be taken from the office or not.* There can be no legal discontinuance until the payment is made.

4. If the subscriber orders his paper to be stopped at a certain time, and the publisher continues to send, the subscriber is bound to pay for it *if he takes it out of the post-office.* The law proceeds upon the ground that a man must pay for what he uses.

5. The courts have decided that refusing to take a newspaper and periodicals from the post-office, or removing and leaving them uncalled for, is *prima facie* evidence of intentional fraud.

THE number of graduates from the several medical schools in Louisville at the last commencements is as follows: University of Louisville, 95; Louisville Medical College, 56; Hospital School of Medicine, 33; total, 184.

SIR WM. GULL commenced as a bottle-washer in the drug-room of Guy's Hospital. His father was a laborer who tilled a small plot of ground adjoining the hospital.—*Western Lancet.*

Selections.

ON INTRA-UTERINE TUMORS.

[A Clinical Lecture, by J. Matthews Duncan, M.D., LL.D., Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital, London.]

In describing polypi and tumors two things are confused, the origin and the situation of the polypus or tumor; and, like all confusions, this one leads to a great deal of harm. A tumor is best named with reference to its origin. To-day we are considering only tumors which are intra-uterine in their origin; which spring from the cavity of the body of the uterus, and which remain there. An intra-uterine polypus may be, in point of situation, vulvar, the polypus hanging in the vulva; that is, between the labia. A polypus intra-uterine in origin is, in the majority of cases, a vaginal polypus in situation; or, again, a polypus which grows from the interior of the body of the uterus may be intra-cervical in situation. And when you hear of intra-uterine polypi, or look at pictures or diagrams of them, what is generally meant is intra-cervical. A fibroid or a mucous membrane growth, if truly intra-uterine in situation, is very rarely a polypus. Except in the case of little mucous intra-uterine polypi, I have never seen an intra-uterine growth which was really a polypus.

An intra-uterine growth, not intra-cervical, is either sessile or has only a neck; it has no distinct stalk to make it a polypus. You may easily perceive that, within the womb proper, there is no room for the development of a stalk to a polypus which is of any considerable dimensions. You must understand, then, that intra-cervical polypi are generally called intra-uterine, and wrongly so; moreover, they are easily diagnosed and managed, compared with truly intra-uterine growths, which are rarely, if ever, polypi, and have only a neck, not a stalk.

You see I do not attempt to make a new nomenclature; that is an easy proceeding, which is rarely advantageous, and still more rarely successful; but I give a designation to growths which are truly within the cavity of the body of the uterus, calling them intra-uterine tumors, not intra-uterine polypi, from their origin and situation combined; and it is only of such truly intra-uterine tumors that I intend to speak to-day.

You will understand the rationality of calling a tumor or a polypus according to its site of origin, and using other terms to denote the situation in which the body of the growth happens to lie, if you think of polypi of the nose. These frequently hang down into the pharynx, and they are not called pharyngeal, but nasal polypi; and we are only carrying out the same rule of nomenclature.

What I have already said indicates that a growth from the interior of the uterus almost invariably grows downward. It begins within the cavity of the body of the uterus, and as it progresses it becomes, under the influences of growth and uterine contractions, intra-cervical, and then it becomes vaginal, and it may even become vulvar in situation. But this is not invariably the case; a polypus may grow up instead of down.

One more word before I come to intra-uterine tumors. What are the polypi, intra-uterine in origin, but in situation intra-cervical? They may be polypi of the mucous membrane. Fibrinous polypi are characteristically intra-cervical, though not invariably so. Placental polypi are occasionally intra-cervical, but not generally. Then there is a rare condition called cervical pregnancy, in which a mole or otherwise healthy ovum has been pushed, in the process of abortion, out of the cavity of the body of the uterus, its original and natural site, into the cavity of the cervix, but still retaining its connections with the mucous membrane lining the body of the uterus. Lastly, you have fibroids, either as true polypi, or as spurious or false; that is, partially enucleated.

What are the varieties of intra-uterine tumor? You have three forms of mucous polypi which occur in this situation: Firstly, adenomatous, that is, consisting of hypertrophied glandular structures of the uterine mucous membrane; secondly, molluscum, that is, hypertrophy of the areolar tissue without glandular developments; and, thirdly, cystic tumors, where the disease is probably the accumulation of fluid within closed glands of the mucous membrane. This cystic degeneration sometimes accompanies or forms an addition to an intra-uterine fibroid. When I do not mention any particular kind of growth in my lecture to-day you will understand me as speaking of an intra-uterine fibroid. Besides an intra-uterine fibroid you may have a fibrinous polypus within the body of the uterus, or a placental mass, of which latter I have narrated examples in a former lecture. When you have an intra-uterine fibroid it is, as I have already said, a sessile growth, or one which has merely a neck, not a distinct stalk; it is therefore not a polypus. It may be a true intra-uterine growth, covered with mucous membrane or with a capsule of muscular tissue in addition; or it may be a spurious or false intra-uterine growth, having no covering, having been to some extent spontaneously enucleated; such a one was at first imbedded in the wall of the uterus, and has been expelled through an opening made in the mucous membrane and muscular tissue, into the uterine cavity, where it may be found as an intra-uterine tumor.

What are the events which may arise in the history of an intra-uterine fibroid? It may cause a woman to bleed till she is at the point of death, and I have repeatedly seen it prove fatal; or, again, it may give no trouble at all, being found only after death, not so much as suspected before. It may be pushed down into the cervix; or farther, into the vagina; and perhaps into the vulva, during which process a stalk is formed, which it did not before possess. It was not a polypus so long as it remained in its place of origin, but when it reached the cervix it became one, whether of the false or true variety; that is, whether still encapsuled or partially enucleated. It may be in the course of this pushing down that it becomes enucleated, or it may be enucleated in its earliest original site, so as to have no covering and lie bare ready to be detached. It may even become completely enucleated; that is, enucleated and detached. Another result still may happen, and is well illustrated by a case which was in "Martha" not long ago. The uterus seizes the intra-uterine tumor as it seizes a mole or a child and pushes it out; but in the course of this process a stalk is not formed; the tumor pulls the probably thin, and therefore weak, uterine attachment with it; and consequently you see the woman with an inverted uterus. It is not a polypus which produces this effect; it is a sessile or necked tumor, which refuses, metaphorically speaking, to form a stalk, pulls the womb down, and turns it inside out.

Here is the proper place to tell you an important

fact which will enable you to avoid what may be a distressing and serious error. In the course of such a history as we have been describing it may happen that the tumor comes down and again retires. If you examine the woman at one time, most likely while she is losing blood, a tumor will be found in her vagina; but when you return, perhaps intending to operate, there is no tumor to be found, it has gone up again. This occurs not only in the case of polypi and of tumors which are clearly and distinctly within the cavity of the uterus, but also in the case of some which are intra-mural or imbedded in the uterine wall, and are undergoing a process of enucleation and expulsion. I shall endeavor to impress this upon you by the history of a case. It was a large tumor in the vagina, which had several times threatened sudden death from loss of blood at the monthly periods, the amount lost being enormous. On examination I found no tumor at all in the vagina; but there was evidence that the woman had a uterine fibroid, not a polypus. I wrote to my friend, who had sent her to me, and found what furnished an explanation of the difficulty. It was that he had examined her during the loss of blood, and it was only necessary for me to wait a few days till it recommenced; and then there was a great fibroid, partially enucleated, down in the vagina, with tremendous flooding. That was not an intra-uterine tumor, according to the principle I have adopted of naming tumors according to their origin, but it was an imbedded tumor in the course of spontaneous cure by enucleation.

An important point I must mention is that you have two distinct sets of cases: one in which the cavity of the uterus is open and expanded; another in which no enlargement has taken place beyond what is required to contain the tumor. You will understand that the former are much more easily dealt with as to diagnosis and treatment than are the latter, where you have to force your way every step you make. In the former class of cases you have only to open the neck of the womb, and you can feel all the uterine cavity; while in the other class you have to force your way every fraction of an inch you progress in making the diagnosis.

All the tumors I have been discussing in this lecture are diagnosed and treated very much in the same way. I have said that an intra-cervical tumor is generally spoken of as intra-uterine; it is easily diagnosed and treated, but it is quite a different matter when we come to intra-uterine tumors proper, and we have had several examples in "Martha" of the difficulties attending their diagnosis and treatment.

Suspicion, which does not reach the length of diagnosis, arises when you find an enlarged uterus, especially if it be also a little deformed; but if the uterus be much deformed it is probable that the tumor is not intra-uterine. If the tumor is small you may have no evidence of enlargement even. Suspicion is first aroused in most cases by the occurrence of loss of blood, which may take place at the monthly periods or altogether apart from them. This loss of blood it is which in most cases impels you to examine per vaginam in order to treat satisfactorily; for without a complete diagnosis treatment is very unsatisfactory. In some cases the intra-uterine tumor produces, in addition to loss of blood, copious serous discharge, or sometimes purulent discharge. I have seen several cases of intra-uterine fibroid in women, after the menopause, where the discharge was not bloody, but evidently from an inflamed uterine cavity and so profuse as to have effects upon the constitution very nearly as powerful as loss of blood.

How are you to make sure of the presence of an intra-uterine tumor? First, you are not to attempt to make sure unless you have sufficient reason; for the process of making sure is itself attended with considerable danger, the danger of septicemia from the injuries the process may cause; the danger of parametritis or perimetritis, which must always enter into our consideration. Let us suppose, however, that the case is serious enough to demand that you proceed. You must get your finger into the inside of the woman's uterus to feel it. Examination by the probe is often spoken of, but it is utterly unsatisfactory. There is only one sort of probing that is conclusive for this kind of diagnosis, and that is with the living, educated finger, the other hand aiding by acting in the bimanual method. This is especially successful in cases where the cavity of the body of the uterus is dilated; then you may be able to insert your finger without further ado, without previous artificial dilatation; or you may, by the exercise of a little force, push the finger through the external and internal orifices; or, again, you may succeed by pressure, while the neck of the womb is held in a vulsella, to prevent its receding before your finger, or to pull it down on your finger. But generally, and invariably in that class of cases where there is no dilatation of the cavity, you have to dilate every particle of the neck and cavity which you wish to explore. Now, dilatation for the purpose of exploration of the cavity of the body of the uterus, when the cavity is not previously enlarged, is a much more difficult matter than is generally supposed. You can push in your dilating apparatus, and keep it in by plugging the vagina, which will dilate only as far as the tent goes; and it is a very natural matter to be deceived and think you have reached the fundus uteri when you have accomplished no such thing.

The best method of dilatation is by means of tangle tents. You must have a tangle tent at least three inches long; because the tangle tent may slip right into the uterus and become lost there, owing to its being too short. A uterus which is much hypertrophied may require even a longer tent than one of three inches to open it thoroughly.

The dilatation completed, you have next to introduce your finger into the cavity so as to touch the fundus, and for this purpose you will probably require to hold or pull down the cervix with a vulsella, upon your finger, in the same way as you pull a glove on a finger. In one case, which I read to you in a former lecture, we could not, in this way, arrive at a diagnosis, because the finger was not long enough to reach a mucous polypus, which was discovered only after the death of the patient, that took place from another disease altogether. In that case the cervix uteri was pulled down upon the finger as far as was possible, and yet the polypus was not reached. The uterus from os tincæ to fundus was four inches and a half long. Had it been a matter of extreme urgency to complete the diagnosis, the only way open to us would have been to push the fundus uteri down on the finger from above, as in bimanual examination. In this manner I might have managed a case in which it was of importance to complete the examination. This method was not successful in the case just referred to.

Treatment: I recommend you to trust in "avulsion." Do not first separate the tumor and then take it off, but use avulsion, doing the two parts of the

operation simultaneously. In the great majority of cases nothing else is required. You seize the little tumor with a vulsella, and with a slight amount of rotation pull it out. It is, if a fibroid, enucleated by the violence. Of course, if it is a fibroid and already partially enucleated, it comes away with no difficulty; but even if it is covered by a thin capsule, by seizing it you can get it away without much trouble. If you should require any cutting, I recommend you to use a pair of curved scissors, though this is very seldom necessary in the case of a fibroid. In the case of a soft mucous tumor which is not a polypus the process of removal resolves itself, involuntarily on your part, into one of torsion and pulling away. You seize the tumor with a pair of uterine dressing forceps and pull it off just as you would pull off a nasal polypus. In both sets of cases the process is essentially one of avulsion. In the case of adherent placental masses you peel off with your nail or with the tip of your finger.

I have never resorted to any means other than those above mentioned. Were I to do so I should throw a wire around the neck of the tumor and burn it off with a galvano-caustic apparatus. I have no particular objection to the écraseur, but I think the other a much nicer operation, and by it you have security against bleeding if you do not cut off the growth too quickly.

Formerly the treatment was to ligature the neck of the tumor and gradually to tighten, strangle, and separate it, all for fear of bleeding, which was expected from quick severing of the connections of uterus and tumor.

Bleeding is, for the most part, a mere bugbear; for nearly in every case there is none. It is chiefly in the case of mucous-membrane growths that there is danger of hemorrhage, which may probably be diminished, however, by giving ergot before the operation. If it should occur it may be stopped by a plug, which is a most valuable means of arresting hemorrhage. This process of plugging you must see for yourselves, for it does not so well admit of description as to entice me to go on to give you an account of it in the present lecture.

You may cut through the body of a fibroid and leave a bit in the uterus without necessarily having important hemorrhage. But this is an undesirable proceeding. At present we have a case in "Martha," where, after two years and a half, the stem of a fibroid partially amputated by one of my predecessors, is still to be seen, dirty and grayish-black, and discharging a brown fluid, but otherwise giving no annoyance. The only case nearly resembling those under discussion, where we have had serious bleeding, was where the tumor was a muscular outgrowth, not a fibroid. It was attached high in the cervix; there was no neck. We cut through the tumor, and the woman bled severely, but a plug was efficient in arresting the hemorrhage even in that case. This kind of tumor has no capsule like a fibroid. It is a continuous outgrowth of the proper uterine tissue.—*Condensed from the Medical Times and Gazette.*

The Blood in Cutaneous Affections.—Dr. Quinquaud reports (*Le Progrès Médicale*) some interesting researches in most skin diseases. He finds that the hemoglobine and other solids of the blood are definitely diminished in all of these affections, and return to their normal proportions and quantity as improvement comes on. In leprosy the amount of hemoglobine is lower than in other diseases.

Wickersheimer's Method of Preserving Anatomical Preparations and Whole Bodies.—From Dr. Holtz's article in the Chicago Medical Journal and Examiner:

Wickersheimer, of Berlin, has invented a preserving fluid by which it is possible to preserve any organic bodies—plants, animals, and human bodies—so that they retain their original natural form, color, and limpid texture.

"The preserving fluid is: One hundred grams of alum, twenty-five grams of cooking-salt, twelve grams of saltpeter, sixty grams of potash, and ten grams of arsenious acid are dissolved in three thousand grams of boiling water. The solution is cooled and filtered. To every ten liters of this neutral, colorless, and odorless fluid there are added four liters of glycerin and one liter of methyl alcohol. For the dry preservation the preparations are immersed in the fluid from six to twelve days, according to their size, and then dried in the air. Organs, like the lungs and intestines, are filled with the fluid before immersion and blown up before drying. Small animals and portions of bodies, which are to be preserved in their natural colors, are simply kept immersed in the fluid. For embalming, the body is injected and laid in the fluid several days. It is then taken out, rubbed off and dried, wrapped in linen or oilcloth saturated with the fluid, and encased in air-tight receptacles. If bodies are to be temporarily embalmed for scientific purposes the injection of one and a half liters (for children) to five liters (for adults) is sufficient. Even after years the cut surface of the muscles shows the appearance of those of a fresh corpse. Bodies treated in this way have not the least odor."

Sulphurous-acid Gas as a Disinfectant.—The experiments of Dr. Geo. M. Sternberg, U. S. A., in the National Board of Health Bulletin, are worthy of remark. His observations were made with sulphurous acid, produced by burning sulphur in a dry-air chamber, and subjecting vaccine virus to these fumes from one minute to twelve hours. He then used the virus on healthy unvaccinated school children in Washington. The disinfected points were used on the left arm, and points from the same virus, *not* disinfected, on the right arm. In every instance, except one in thirty-one experiments, the right arm was the only one on which the vaccination was successful. Dr. S. thus concludes that "the burning of one and one half to three grains of sulphur per cubic foot of air space produces sufficient sulphurous acid gas to arrest the vital movements of bacterium termo in from one to two minutes."

The Audiphone.—Medical Press and Circular: We recently drew attention to this instrument, which was exhibited at the *conversazione* of the Harveian Society, and we expressed some doubt as to its efficiency in the direction claimed for it. In confirmation of our opinion, the Chicago Med. Journal and Examiner says: "Messrs. Sharp & Sons have been carefully testing the audiphone for several weeks, but thus far they have not found any patients benefited by it. Out of one hundred and fifty successive cases of deafness in which they have given it a trial, they report that not one single one has noticed any benefit in its use."

A case of tetanus produced by the presence of a foreign body in the conjunctival sac has lately been recorded in the *Centralb. f. Augenh.*